Boa Vista do Acará
Collaborative Ecological Design Process

Thiago Nunes
Cleidson Teles
Felix Lux
Rafael Camargo
Samuel Gabanyi
Wendy Oliveira
Roberto Cevallos
Jorge Espinosa

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Contents

Report Specification

The following report is the result of a design process that is experimental for IDDS. Drawing from The Timeless Way of Building by Christopher Alexander, The Path of Least Resistance by Robert Fritz, Edible Forest Gardens by Dave Jacke and Eric Toensmeier, Holistic Management by Allan Savory, the Collaborative Ecological Design Process used at IDDS Amazon in the year leading up to the summit and that is ongoing with our community partners, is a way for projects to relate and connect to the broader community and ecosystem they nourish and are nourished by.

The main difference between this report and other IDDS reports is in the optional **Technology/Final Prototype** section. Because of the diversity of outcomes of the process the more general title of **Prototypes and Outcomes** was used.

Other differences are the Project Goal Statement which has replaced the Problem Framing Statement in the Context section and the substitution of a Problem Framing Tree with a "Project Frame."

The reason for these substitutions is that in Ecological Design Process problems are seen as arising from systemic issues, and without addressing them at the level of systems a focus on the problem at best can leave the root cause unresolved and at worst can create more problems than it solves.

Another useful distinction is that when referring to the process of designing an ecosystem for a client 'Ecological Design Process' is used. When referring to the process used at IDDS Amazon and other team efforts using this process, the word, 'Collaborative' is added as adistinction.

Other important resources used in the creation of the summit curriculum, the framing of the projects, as well as the IDDS Amazon workbook are Regenerative Enterprise by Ethan Roland and Gregory Landua, Carol Sanford's definition of Regenerative Business, and Dave Holmgren's Permaculture Principles and Pathways Beyond Sustainability.

Context

The year long engagement with the community of Boa Vista do Acará leading up to IDDS Amazon mainly revolved around understanding the needs and desires of community members, mainly the Association of Organic Producers of Boa Vista (APOBV.) The workshops held in the months before the summit were prototype events, testing out working on projects together and addressing concerns related to the summit. The projects for the summit were projects articulated in community meetings and the Collaborative Ecological Design Process (CEDP) Project was formed to deepen the conversation with community members, to form connections between projects in the broader design process the community has engaged in and will continue to pursue with some of the summit organizing team for project continuity.

Of the phases of Ecological Design Process: Goals Articulation and Site Analysis (which parallel Information and Insight in the IDDS design cycle) Design (Ideas and Approaches) and Implementation and Evaluation, the Collaborative Ecological Design Process Team focused their efforts in the phase of Goals Articulation, the actions which were carried out and implemented were very much about integrating the broader community in a conversation about needs and visioning for the future.

The Community of Boa Vista do Acará reflects back to us some of the dynamic aspects of international development. Many people here might fit the definition of poverty in terms of dollars a day, however this is a community that is strong, where basic needs of survival are well met. And so the community members that have welcomed us into their midst with open arms have been throughout this process, during the summit and to this day a clear mirror, that in a place where the ecosystem and community (which are truly quite inseparable from each other) are strong, activities geared to the creation of financial wealth may end up liquidating living ecosystem into goods, or liquidate community relationships into services. This project enlisted the help of participants to cocreating a systems approach in guarding against the potentially hazard effects of development by encouraging gains in diverse forms of capital, not just financial.

Project Goals Articulation

The CEDP team engages the community members of Boa Vista do Acará and specifically APOBV members to articulate needs and desires, creating projects and connections for projects, including the IDDS Amazon Design Projects, based on their visions for the future.

Design Process and Frame

Ecological Design Process as expressed by Dave Jacke and Eric Toensmeier in Edible Forest Gardens consists of five interrelated and reiterating phases through which one moves in nonlinear fashion. These phases very much parallel the IDDS design cycle, the main difference is the shift from a reactive and responsive focus on problems, to working creatively towards a vision. In general terms our project frame can be seen as the idealized Boa Vista of the future that our partners want to create and leave for their children. That massive frame encompasses the Collaborative Ecological Design Process APOBV is engaging in, in particular the creation of a cooperative to better frame the productive and specifically money making activities of the associates, which fall beyond the nonprofit activities of APOBV. Those two frames and the space between them holds the frames of the projects started at IDDS Amazon.
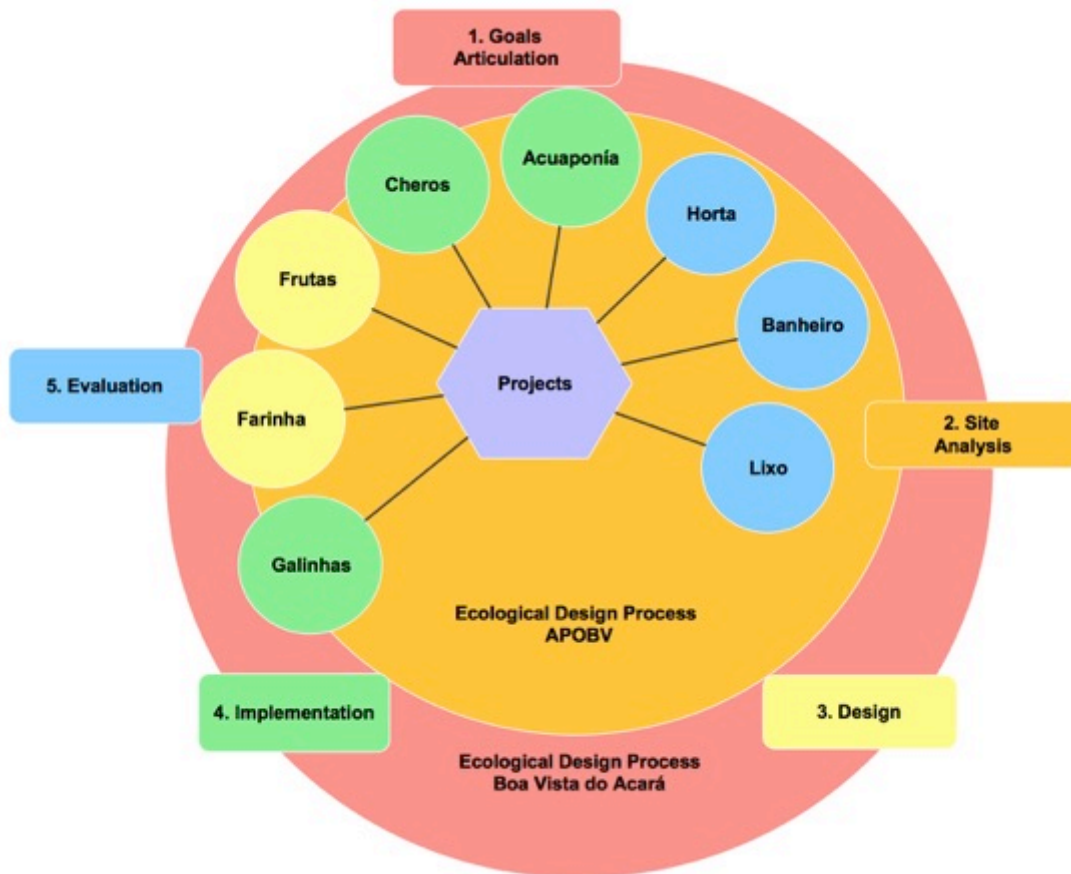
During the two weeks of the summit the CEDP team focused mainly on speaking with people of the community. We documented the needs we were hearing expressed. We also asked about the future of the community and what their hopes are. Based on some of the concerns we heard we also designed and implemented some actions, which are described in the following section.

Prototypes and Outcomes
1. Boa Vista Pattern Language
A pattern language is a compilation of relationships between elements and their context. Each one of the patterns or relationships usually addresses a problem or describes a way a need gets met. A pattern language is like the kit of parts in any large design project. It is an evolving tool that is put into the hands of a community so that it can be adapted and used for bringing about a desired future reality. Pattern Languages are a tool now used from City and Regional Planning to Computing and Networks.

The Pattern Language emerging from this project will become a tool for the people of Boa Vista do Acará and will serve as an example for other communities. Some of the patterns are being adapted from other resources. Some are arise from observation before the summit, as well as project work during the summit. Following is a working list of patterns:

Patterns[1] of the Acará River Watershed
The Mato,[2] Access to Water, Accessible Forest,[3] Pools and Streams, Common Land, Terraced Slopes...

Patterns for Boa Vista do Acará
The Alameda,[4] Network of Learning, Degrees of Publicness, Health Center, Compost, Green Streets, Public Outdoor Room, Adventure Playground, University as Market Place, Master and Apprentice, Tree Places, Tree Houses...

Patterns for APOBV
General Patterns
Work Community, Necklace of Community Projects, Outdoor Kitchen, The Forno...
Regenerative Agriculture Patterns
The Regenerative Roça, Fire Mimicry, Terra Preta, Three Layer Minimum, Planting Successions, Pits and Mounds, Rotting Wood, Edible Decomposers, Restorative Acuaponics...
Future Cooperative Enterprise
Beyond Organic, Multicapital Gains, Community Supported Agriculture, Community led Ecological Tourism...

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[1] Patterns adapted from A Pattern Language will be noted as APL and the corresponding number. Patterns adapted from Edible Forest Gardens will be noted as EFG and their number.
[2] APL #7 *The Countryside*
[3] APL # *Accessible Green*
[4] APL #14 *Identifiable Neighborhood,* APL#37 *House Cluster*

2. Needs Inventory, Design Requirements and Connections for Projects
In Path of Least Resistance, Robert Fritz points out that in the transition towards a proactive and creative approach to design, it is important to get basic needs met as soon as possible, so that people are at liberty to do things because they want to, and not because they have to. Marshall Rosenberg's work on Nonviolent Communication also supports this notion. From the beginning of the organizing team's interaction with people at the Association the dialogue was about needs, and most of the projects were born from those conversations. The three questions that the CEDP team asked were, **What in your view are the most urgent needs? What do you love about Boa Vista do Acará?** and **What are your visions for the future?** The following graphic is a work in progress at organizing and cataloguing people's responses.

One of the important roles of this project was to connect and relate the other projects to each other. Each team member spent at least a whole day with one other group, and fed back to our project the essential patterns of each project which we then organized into the following graphic. This exchange was also advantageous to communicate to the other teams some of the ways that all projects were meant to contribute to the broader ecosystem and community. For all the projects the CEDP team delivered the following two criteria to integrate into their projects:

1. What forms of capital other than financial will your project build?
2. How will your project strengthen community?

Based on our findings we layered that information over our previous needs inventory. Following is a work in progress representation:

This information is being compiled into a publication to share with associates and community. It will also contain information about the projects.

3. Bons Sonhos

The team put together some of the recurring themes that people expressed into a goal statement, by placing the words expressed by community members about their future reality in active voice and present tense. This is a common excercise in Ecological Design Process to test Goal Statements for authenticity. A song emerged from this excercise, it became a sort of anthem for the summit, still being sung and hummed by children and adults in Boa Vista.

Bons Sonhos *Good Dreams*
Honramos nossos costumes e tradicoes
We honor our customs and traditions
E regeneramos a natureza pois e ahi que reside nossa forca
and regenerate nature because therein lives our strength

Bons sonhos, bon sabor, bons cheros, boa vista e bom sons
Good dreams, good flavors, good smells, good sights, good sounds.

Como uma so familia vivemos em paz e armonia
As a single family, we live in peace and harmony
E educamos e cuidamos da nossass criancas nosso tesouro
We educate and take care of our children, our treasure

Garantimos a saude da nossa comunidade, a recreacao
We ensure the health of our community, recreation,
criamos oportunidades para nos aprimorar, e realizar
and create opportunities for us to thrive, and realize...

4. Living School Concept Map

The fact that people need to leave for school and for work is a big source of concern and hardship for people in Boa Vista do Acará. We brainstormed ways in which connections can be made to UFPA and other educational institutions, and how the unused resources of APOBV and the wisdom present in the community can be optimized to fill some of the vacuums in the educational opportunities in the community. Tightening the bonds with the school and access to internet will make further exploration of educational opportunities possible. APOBV leadership and the schoolteachers have had a first meeting and they are collaborating on several initiatives including the creation of a school garden and sandcourt. Thiago will be teaching music lessons as a volunteer for the rest of the year. Renata will also coordinate activities revolving around art, recycling and ecological agriculture.
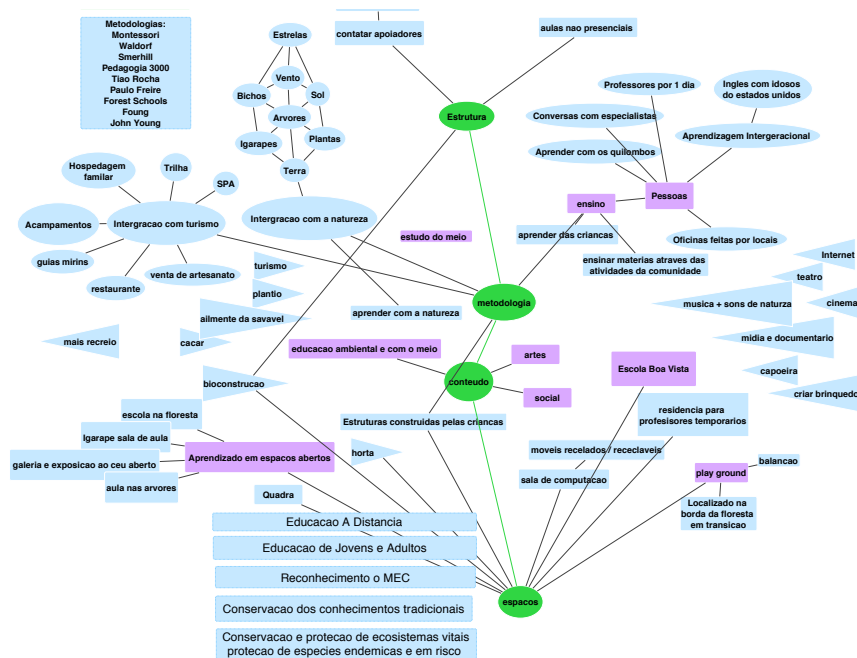
5. Igarapé Conservation

The Igarapés are pools of slowly running water that springs from the forest floor. They connect to each other and are common places for recreation, meetings, washing clothes and dishes, and bathing. They are essential to community life. They are also filling up with sand from erosion because of clear cutting in their vicinity. Starting with the skill building exercises we began to experiment with some light touch conservation works digging a small trench on contour and doing plantings to hold back erosion. The team spent a great amount of time discussing the concern of the community for some sort of conservation/regeneration strategy. This has been identified as one of the crucial projects for the community moving forward and can be one of the places where resources are redirected from income generating projects.


There is great concern for the future of the Igarapés due to the future paving of the main stretch in Boa Vista, as well as deforestation from the electrical lines which will directly impact the Igarapés. A proper assessment of potential damage is necessary in order for the community to take preventive and/or restorative actions.

## 6. The Forno as the Heart of the Alameda

The outdoor processing plant where cassava flour or "farinha" is produced is a conglomerate of appropriate and human scale technologies from which emerges a livelihood that is totally in harmony with its ecosystem. The variability of farinha's market price over the years made the process incredibly burdensome for many families in the region a couple of decades back and many communities shut down their farinha operations. Families that made it through that difficult time are now facing the challenge that children growing up through those days are not carrying on the tradition even though the market price has gone up and it is possible to get by without having to produce farinha everyday. The parents all encouraged their kids to go to school and pursue other jobs and the kids also grew up afraid of the backbreaking labor their parents went through, and the formal education system which is obligatory by law has separated an entire generation from the livelihood of their parents be it farinha, açai or any of the traditional food ways.

Observing the farinha process it is impressive to note that the lines of raw material and finished product never cross each other, materials that touch the food preparing surfaces never touch the floor, and many other examples of food safety procedures of the strictest nature are present in a millennia old process. Even the bio char yielded as a waste of the process goes to contribute to the fertility of the gardens as well as the stability of the climate.
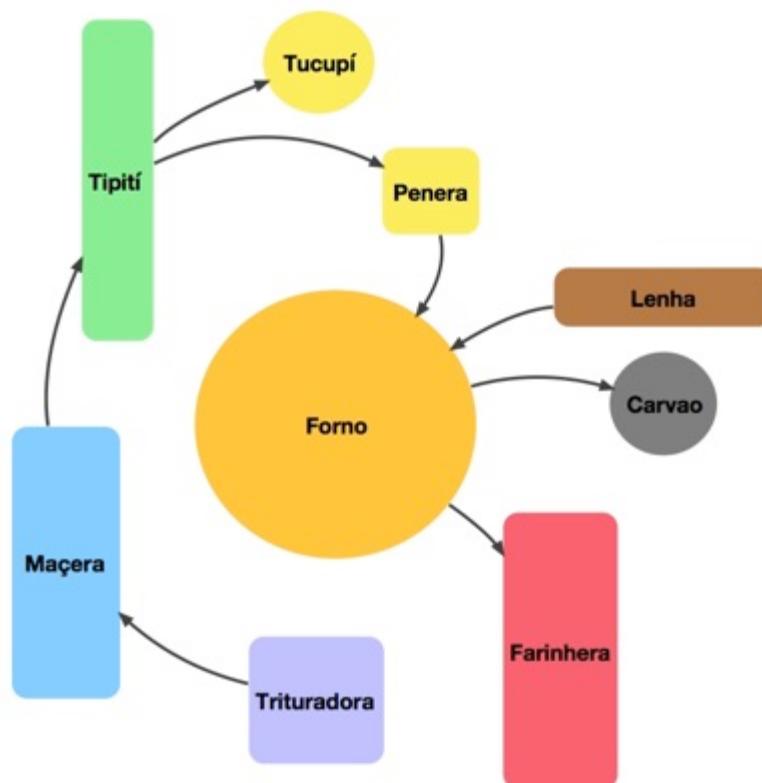
The fornos are a source of pride for families as well as a source of pain from the disconnection to the next generations. Is it possible that because farinha is not being produced every day that these processing plants can be adapted to the other processes essential to projects started at IDDS Amazon or beyond? What about the use of these for common meals for the strengthening of community for the sharing of meals and work loads?

What would happen if we combine the forno with other appropriate technologies like generation of electricity from heat, and micro gasifying mechanisms like rocket and TLUD systems, bio char production, and the fireless oven?
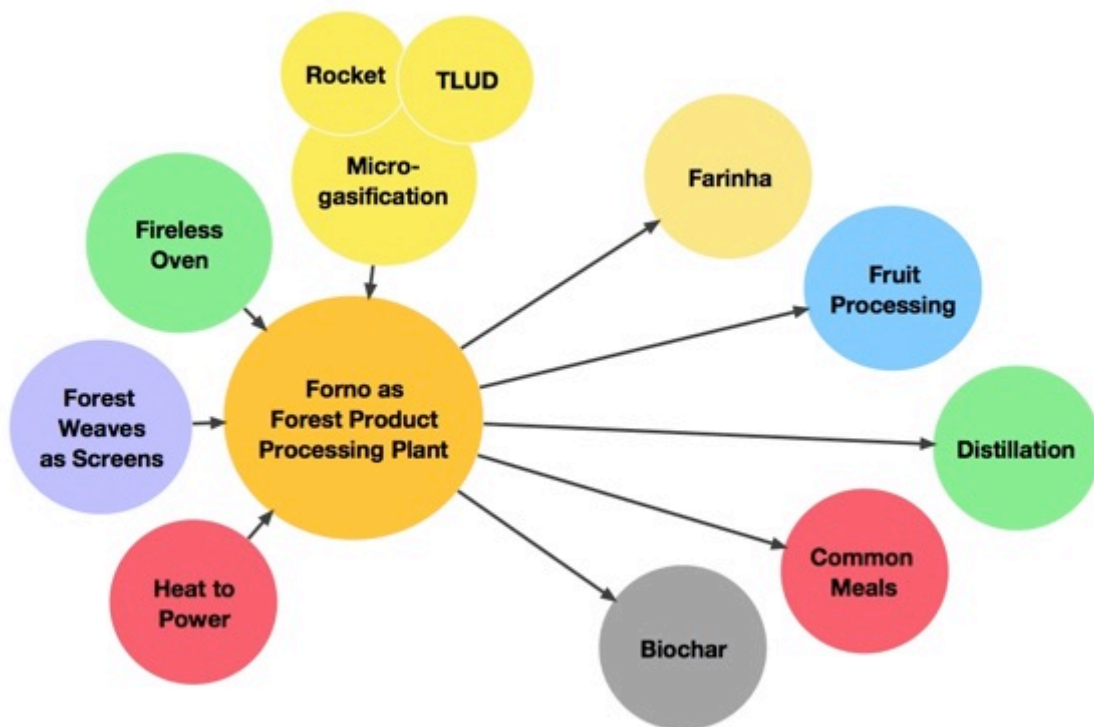
7. Politicians Letter of Commitment

Our team drafted the following letter of commitment for community members to adapt according to their needs. It is a tool in dealing with politicians and their varying willingness to keep promises made to communities especially when it comes to respecting public service needs and ecosystem health.

It is a document that they can ask politicians to sign during their campaigns agreeing to look after community interests, when these politicians come into power they can use this letter as a reminder to the politician and also as a way to exert the necessary pressure when the circumstance calls for it.

Carta Compromisso

Eu, _____, candidato a prefeito de Acará nas eleições para o mandato do quadriênio de 2017 a 2020, me comprometo, conforme demanda da APOBV, XXXXX, AAAAAA e AKJDSGS e de seus familiares, a executar os seguintes tópicos:

Garantir que o posto de saúde sempre tenha os medicamentos necessários para atender a população.

Garantir um sistema de transporte escolar eficiente que garanta que todas as crianças possam ter acesso à escola.

Garantir ferramentas para que em qualquer projeto, que afete a comunidade ou o meio ambiente, todos os moradores sejam ouvidos e que suas considerações sejam levadas em consideração.

Garantir merenda em quantidade e qualidade para todos os alunos em todas as escolas.

Garantir que os ramais de acesso estejam constantemente em bom estado.

Implantar um sistema de gestão de resíduos na comunidade que inclua um plano de coleta seletiva atrelado a um programa de educação ambiental

Criar uma casa de agricultura ecológica que forneça assistência técnica especializada em agroecologia para os agricultores da região.

Estruturar um centro educacional que ofereça cursos técnicos, profissionalizantes, de línguas, artes e esportes.

_____   _____

Assinatura   Local e Data

8. Welcome Signs

Many community members expressed a great amount of concern about Boa Vista's beauty attracting attention of tourists from the city that come and leave waste behind and not behaving respectfully toward community and ecosystem. Cleidson insisted we create signs for the port and the school to both welcome people to Boa Vista do Acará and give voice to the community's desire for respect from visitors. The signs were created using scrap wood and a pyrograph that many of the community including children learned how to use, and they read:

<div align="center">

Welcome to Boa Vista do Acará .
Connect to our community and to nature
Take only pictures
Leave only your footprints
Carry away only good memories!

</div>

9. Dream Tree
In one of our interviews with a schoolteacher she reported having a difficult time learning about children's dreams in the community. She went as far as to say that children do not have dreams. This contrasted with our experience speaking to children, we had a very easy time dreaming up adventure playgrounds together. We created a way for people to articulate dreams and visions and easily share them in a common space at APOBV. We used Açaí palm and natural fibers to hang them from the branches.

10. Waste Management System

One of the great learnings at IDDS Amazon was that even though we had less participants than expected, and none of them selected the Waste Management Team as a top choice, if we were to do it all over again we would not eliminate this project.

The summit had an awesome waste management system which led to the production of only 86.7 kg of waste during the whole summit. That was all the waste generated by 70 people during 2 whole weeks!

However the issue at APOBV and Boa Vista at large remains. Their agreement with their buyers only demands minimal management of waste which means a hole in the forest floor like many we have seen throughout our visits.

We have formed a committee at the school and at APOBV to work on this issue at the grassroots level. And we have drafted a waste management plan to take the issue to the community wide level for a waste collection system to be implemented in the community.

Lessons Learned

This team's experimental engagement in a broader design process yielded many lessons that are still unfolding.

1. Using models that deal with broader systems design and complexity is a challenge because of all the moving parts. This approach is also proving to be crucial in moving forward in a way that helps communities empower themselves.

2. Ecological Design Process, Holistic Management, Regenerative Enterprise, Timeless Way of Building, Path of Least Resistance are overlapping methodologies that begin with people visioning together about the future of their ecosystem and community. This has been an element missing in IDDS methods, though the seed has been present in the Hopes and Dreams section of Morning Circle. This team took on this aspect of design process head on and found that the hubris of a 2 week design event, the high pressures of producing something work against the taking a step back necessary to vision, and document and process all the visioning. Furthermore, the academic and development focused, industrialized (and industrializing) culture is one where many people use the hubris and busy-ness of a productivity mindset as justification to not think about what they want for themselves, to not engage in self care and tend to relationships, and this is the kind of behavior we are modeling for communities.

3. The advances made during the design process leading up to the summit was problematic because the team when introduced to the work was disappointed that they were pushing further other people's work. And so even though we say that it is alright for projects to be framed around other phases further along the design cycle, there may need to be more management of expectations around this for participants. The way we addressed it in this team was to leave completely open how to move forward. The team chose to go back to square one. It was important to allow that in terms of facilitation because then they took ownership of the project and it is amazing how much was realized in such a short time.

4. Home stays are crucial to grounding design processes in reality.

5. It is possible to have a near zero waste summit, and we have established an 87.6 kg baseline for other summits to measure upagainst.

6. The questions that the team asked community members in the Needs Inventory could have well been asked and probably processed more efficiently by the Monitoring and Evaluation Fellow. However, the questions were not only about the information being collected, it was about the connections being made between teammates, some of whom are locals, and their community! This is an important thing to keep in mind, because the insight gained and distilled into info graphics by the team are one important outcome, however the practice of pursuing an understanding of the other, and bridging that otherness has emergent properties that are quite difficult to catalogue and account for.

7. There are many design opportunities currently beyond the capacity of a lot of IDIN. The projects as they stand at this stage fall short at being fully integrated and well functioning systems, and need a lot of support from other holistic planners and designers.

Next Steps and Project Future

We knew when we embarked on this journey that it would not end with the summit. The ability to continue an immersion in Boa Vista do Acará as Senior Design Facilitator has yielded a greater understanding of the reality of community and ecosystem and this kind of immersion would benefit any summit. The diverse components of this project are being carried forward by teammates as well as other organizers and collaborators.

1. Boa Vista Pattern Language Jorge Espinosa, Samuel Gabanyi, Raphael Camargo, Felix Egle, Wendy Oliveira
2. Bons Sonhos Thiago Nunes, Jorge Espinosa, Debora Chagas
3. Needs Inventory Jorge Espinosa, Roberto Cevallos, Raphael Camargo
4. Design Requirements and Project Connections Jorge Espinosa, Samuel Gabanyi, Roberto Cevallos, Raphael Camargo
5. Living School Concept Map Thiago Nunes, Renata Maués, Roberto Cevallos, Wendy Oliveira
6. Igarapé Conservation Roberto Cevallos, Felix Egle, Wendy Oliveira
7. Forno as Heart of the Alameda Jorge Espinosa, Wendy Oliveira
8. Politicians Letter of Commitment Samuel Gabanyi
9. Welcome Signs Cleidson Teles
10. Dream Tree Cleidson Teles
11. Waste Management System Samuel, Jose María, Jorge, Wendy, Roberto, Debora Chagas, Seu Paulo

We have not only identified next steps for each of the activities of this team, but have also made a list of next steps for each of the projects of the summit. Those will be included in a consequent continuity report along with the steps taken with each one.

Future collaborations are also being planned, among them a more focused Regenerative Agriculture workshop to more fully equip community members (especially from the association and school) with Ecological Design Process skills and knowledge.

Contact Information

Thiago Nunes (91) 98344-0502
Cleidson Teles (91) 99181-2637
Felix Egle felix.egle@gmail.com
Rafael Camargo rafacamargo@gmail.com
Samuel Gabanyi samuel.gabanyi@gmail.com
Wendy Oliveira wendyoliveira@gmail.com
Roberto Cevallos redcreacion@hotmail.com
Jorge Espinosa jorgeaespin@gmail.com